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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tsai-Fa Hsu

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EXAMINER

TRAN, BINH X

ART UNIT

PAPER NUMBER

1792

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

INTPROP@SSMP.COM

Office Action Summary	Application No. 10/789,504	Applicant(s) HSU ET AL.	
	Examiner Binh X. Tran	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/29/04; 5/21/08</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 1-8, 12-16) in the reply filed on 5-27-2008 is acknowledged. The traversal is on the ground(s) that "even assuming, pro arguendo, that the Examiner was correct in a showing of distinctness, there is absolutely no indication that Groups I and II are also independent. Therefore, in light of the foregoing statutory and regulatory criteria, the present restriction requirement cannot be maintained since it lacks a showing that allegedly several inventions are independent, one from the other". This is not found persuasive because, the MPEP 806.06, states "Inventions as claimed are independent if there is no disclosed relationship between the inventions, that is, they are unconnected in design, operation, and effect. If it can be shown that two or more inventions are independent, and if there would be a serious burden on the examiner if restriction is not required, applicant should be required to restrict the claims presented to one of such independent inventions." There is a serious burden on the examiner to search and examine both product and process of using product (group II). Further the previous office action, the examiner clearly shown that the product as claimed in group I can be used in a materially different process of using that product such as suing the composition as an adhesive material for bonding. Therefore, the examiner still maintains that group I and group II are independent and distinct.

Further, the applicants is advised that MPEP 821.04, states "where restriction was required between a product and a process of making and/or using the product, and the product invention was elected and subsequently found allowable, all claims to a nonelected process invention must depend from or otherwise require all the limitations of an allowable claim for the claims directed to that process invention to be eligible for rejoinder See MPEP § 821.04(b). In order to retain the right to rejoinder, applicant is advised that the claims to the nonelected invention(s) should be amended during prosecution to require the limitations of the elected invention. Failure to do so may result in a loss of the right to rejoinder."

Group I of the present invention is drawn to the product (i.e. composition) and Group II of the present invention is drawn to the process of using the product. Since applicants elected Group I (product), and **if** Group I subsequently found allowable, withdrawn process claims (Group II) which depend from or otherwise require all the limitations of an allowable product claim will be considered for rejoinder (Please see MPEP § 821.04(b) for further detail). At the moment, the elected Group I is not found allowable as discussed below, therefore the restriction is still proper.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 9-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5-27-2008.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-8, 12-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 and 12, "wherein the mixing ratio of said epoxy resin to said curing agent is in the range of from 0.7 to 1.1" is indefinite because it is unclear from the claim what specific mixing ratio (e.g. weight ratio, volume ratio, mole ratio, etc) that applicants wish to refer.

Claims 2-8 are indefinite because they directly or indirectly depend on indefinite claim 1.

Claims 13-16 are indefinite because they directly or indirectly depend on indefinite claim 12.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

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351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-8, 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichiroku et al. (US 2002/0022681 A1).

Respect to claims 1-2, Ichiroku discloses a composition comprising:

(a) epoxy resin;

(b) a curing agent (abstract);

wherein the molar ratio of the curing agent per mole of epoxy group is from 0.5 to 1.5, preferably from 0.8 to 1.3 (paragraph 0021). Base on this information, the ratio of epoxy to the curing agent can be calculated to have a range from 0.667 to 2, preferably from 0.77 to 1.25 (i.e. reciprocal value of 1.5 to 0.5 and reciprocal value of 1.3 to 0.8; overlapping applicant's range).

Respect to claims 3-4, 12-13, Ichiroku discloses the epoxy resin is selected from the group consisting of bisphenol A epoxy resin, bisphenol F epoxy resin, cycloaliphatic epoxy resin (i.e. cyclopentadine epoxy resin) (See paragraph 0015). Respect to claims 5, 12-13, Ichiroku discloses the curing agent is selected from acid anhydrides (paragraph 0019). Respect to claims 6, 14 Ichiroku discloses the acid anhydride is selected from the group consisting of hexahydrophthalic anhydride, methyl hexahydrophthalic anhydride (paragraph 0019)

Respect to claim 7-8, 15-16, Ichiroku discloses the composition further comprises a promoter selected from the salts, quaternaries and imidazoles of 1,8-diazabicyclo[5,4,0] -undec-7-ene, and a mixture thereof (paragraph 0022-0023).

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7. Claims 1-8, 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Wada et al. (US 5,145,889).

Respect to claims 1-2, Wada discloses a composition comprising:

(a) 100 part epoxy resin;

(b) 70-140 curing agent (abstract);

Base on this information, the ratio of epoxy to the curing agent can be calculated to have a range from 0.714 to 1.428 (i.e. $100/140 = 0.714$ and $100/70 = 1.428$; overlapping applicant's range). Further, in Figure 4, Wade discloses the ratio of curing agent/epoxy range from 0.7 to 1.3 including data point at 1 (read on applicant's range).

Respect to claims 3-4, 12-13, Wada discloses the epoxy resin is selected from the group consisting of bisphenol type epoxy resin, cycloaliphatic epoxy resin (col. 3 lines 60-65). Respect to claims 5, 12-13, Wada discloses the curing agent is selected from acid anhydrides (col. 4 lines 5-15). Respect to claims 6, 14 Wada discloses the acid anhydride is selected from the group consisting of succinic anhydride, hexahydrophthalic anhydride, methyl hexahydrophthalic anhydride (col. 4 lines 5-15).

Respect to claim 7-8, 15-16, Wada discloses the composition further comprises a promoter selected from the salts, quaternaries of 1,8-diazabicyclo[5,4,0] –undec-ene, and a mixture thereof (col. 4 lines 50-61, col. 14 line 1-5).

8. Claims 1-8, 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sumita (US 2002/0077421 A1), hereafter refer as Sumita ('421).

Respect to claims 1-2, Sumita ('421) discloses a composition comprising:

(a) epoxy resin;

(b) a curing agent (abstract);

wherein the molar ratio of the curing agent per mole of epoxy group is from 0.5 to 1.5, preferably from 0.8 to 1.2 (paragraph 0017). Base on this information, the ratio of epoxy to the curing agent can be calculated to be from 0.667 to 2, preferably from 0.833 to 1.25 (i.e. reciprocal value of 1.5 to 0.5 and reciprocal value of 1.2 to 0.8; overlapping applicant's range).

Respect to claims 3-4, 12-13, Sumita ('421) discloses the epoxy resin is selected from the group consisting of bisphenol A epoxy resin, bisphenol F epoxy resin, cycloaliphatic epoxy resin (i.e. cyclopentadine epoxy resin) (See paragraph 0009). Respect to claims 5, 12-13, Sumita ('421) discloses the curing agent is selected from acid anhydrides (paragraph 0014-0015). Respect to claims 6, 14 Sumita ('421) discloses the acid anhydride is selected from the group consisting of hexahydrophthalic anhydride, methyl hexahydrophthalic anhydride (paragraph 015).

Respect to claim 7-8, 15-16, Sumita ('421) discloses the composition further comprises a promoter selected from the salts, quaternaries and imidazoles of 1,8-diazabicyclo[5,4,0] -undec-7-ene, and a mixture thereof (paragraph 0022-0023).

9. Claims 1-8, 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sumita (US 2002/0089071 A1), hereafter refer as Sumita ('071).

Respect to claims 1-2, Sumita ('071) discloses a composition comprising:

(a) epoxy resin;

(b) a curing agent (abstract);

wherein the molar ratio of the curing agent per mole of epoxy group is from 0.5 to 1.5, preferably from 0.8 to 1.2 (paragraph 0021). Base on this information, the ratio of epoxy to the curing agent can be calculated to be from 0.667 to 2, preferably from 0.833 to 1.25 (i.e. reciprocal value of 1.5 to 0.5 and reciprocal value of 1.2 to 0.8; overlapping applicant's range).

Respect to claims 3-4, 12-13, Sumita ('071) discloses the epoxy resin is selected from the group consisting of bisphenol A epoxy resin, bisphenol F epoxy resin, cycloaliphatic epoxy resin (i.e. cyclopentadine epoxy resin) (See paragraph 0014). Respect to claims 5, 12-13, Sumita ('071) discloses the curing agent is selected from acid anhydrides (paragraph 0019). Respect to claims 6, 14 Sumita ('071) discloses the acid anhydride is selected from the group consisting of hexahydrophthalic anhydride, methyl hexahydrophthalic anhydride (paragraph 0019).

Respect to claim 7-8, 15-16, Sumita ('071) discloses the composition further comprises a promoter selected from the salts, quaternaries and imidazoles of 1,8-diazabicyclo[5,4,0] -undec-7-ene, and a mixture thereof (paragraph 0027).

Claim Rejections - 35 USC § 103

10 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-7, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubinsztajn (US 2003/0071368 A1).

Respect to claims 1-2, Rubinsztajn discloses a composition comprising:

- (a) epoxy resin;
- (b) a curing agent (abstract);

Claims 1-2 differ from Rubinsztajn by the specific mixing ratio. However, Rubinsztajn clearly discloses the weight amount of epoxy resin and curing agent is a result effective variable by changing the weight percentage value of each component (See paragraph 0025-0026). The result effective variable is commonly determined by routine experiment. The process of conducting routine experiments so as to produce an expected result is obvious to one of ordinary skill in the art. Hence, it would have been obvious to one having ordinary skill in the art, at the time of invention, to perform routine experiment to obtain optimal mixing ratio because it has been held that determination of workable range is not inventive.

Respect to claims 3-4, 12-13 Rubinsztajn teaches the epoxy resin is a cycloaliphatic epoxy resin, aliphatic epoxy, bisphenol-A epoxy resin, bisphenol-F epoxy resin (abstract, paragraph 0018-0020). Respect to claims 5-6, 12-14, Rubinsztajn discloses the curing agent is anhydride selected from the group consisting of methyl hexahydrophthalic anhydride (paragraph 0021). Respect to claims 7, 15 Rubinsztajn discloses the composition comprises a curing modifier (abstract, read on promoter).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571)272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Binh X Tran
Primary Examiner
Art Unit 1792

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